

Table S-1. Tank 16 waste removal process and curies removed with each sequential step.

Sequential Waste Removal Step	Curies Removed	Percent of Curies Removed	Cumulative Curies Removed	Cumulative Percent Curies Removed
Bulk Waste Removal	2.74×10^6	97%	2.74×10^6	97%
Spray Water Washing	2.78×10^4	0.98%	2.77×10^6	97.98%
Oxalic Acid Wash & Rinse	5.82×10^4	2%	2.83×10^6	99.98%

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for criticality would need to be done before using chemical cleaning in any tank and may result in the identification of additional tank-specific controls to ensure prevention of criticality.

environmental impacts of proposed actions and alternatives. This process also provides several ways the public can be informed about and influence the selection of an alternative.

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Also, extensive chemical cleaning could affect downstream waste processing activities (DWPF and salt disposition). For example, the presence of oxalates in the waste feed to DWPF that would result from oxalic acid cleaning would adversely affect the quality of the glass, and special batches of the salt disposition process could be required to control the sodium oxalate concentration.

In 1995, DOE began preparations for closure of the HLW tanks. DOE prepared the *Industrial Wastewater Closure Plan for F- and H-Area High-Level Waste Tank Systems*. At the same time, DOE prepared the *Environmental Assessment for the Closure of the High-Level Waste Tanks in F- and H-Areas at the Savannah River Site* (DOE/EA-1164). In a Finding of No Significant Impact signed on July 31, 1996, DOE concluded that closure of the HLW tanks in accordance with the General Closure Plan would not result in significant environmental impacts. Since that time DOE has closed Tanks 17 and 20.

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Cleaning of Secondary Containment

Nine HLW tanks have leaked measurable amounts of waste from primary containment to secondary containment, with only one leaking to the soil surrounding the tanks. For these tanks, the waste would be removed from the secondary containment using water and/or steam. Such cleaning has been attempted at SRS on only one tank (Tank 16), and the operation was only about 70 percent completed, because salts mixed with sand (from sandblasting of tank welds) made salt removal more difficult. Cleaning of the secondary containment is not a demonstrated technology and new techniques may need to be developed. The amount of waste that would remain in secondary containment after bulk waste removal and cleaning is small, so the environmental risk of this waste is minimal compared to the amount of residual waste that would be contained inside the tanks.

DOE re-examined the 1996 Tank Closure Environmental Assessment and decided to prepare an EIS before any additional HLW tanks are closed at SRS. This decision was based on several factors, including a desire to more thoroughly explore the environmental impacts from closure and to open a new round of information sharing and dialogue with stakeholders. In the December 29, 1998, Federal Register, DOE published a Notice of Intent (NOI) to prepare an EIS on closure of the HLW tanks (63 FR 71628). Publication of the NOI began a 45-day public scoping period. DOE held public scoping meetings on January 14, 1999, in North Augusta, South Carolina, and on January 19, 1999, in Columbia, South Carolina. DOE considered comments received during the scoping period in preparing this EIS.

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S.3 NEPA Process

NEPA provides Federal decision makers with a process to use when considering the potential

DOE published the *Savannah River Site, High-Level Waste Tank Closure Draft Environmental*

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Impact Statement (DOE/EIS-0303D) in November 2000. DOE held public meetings on the Draft Environmental Impact Statement in North Augusta, South Carolina, on January 9, 2001, and in Columbia, South Carolina, on January 11, 2001. The public comment period ended on January 23, 2001. DOE received 18 letters on the Draft EIS. Court reporters documented comments and statements made during two public meetings, at which eight individuals asked questions, provided comments, or made statements. These comments have been addressed in the Final EIS and the comments, along with DOE's responses, are given in Appendix D of this EIS. The major points and DOE's responses are discussed at the end of this Summary.

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S.4 Purpose and Need

DOE needs to reduce human health and safety risks at and near the HLW tanks, and to reduce the eventual introduction of contaminants into the environment. If DOE does not take action after bulk waste removal, the tanks would fail and contaminants would be released to the environment. Failed tanks would present the risk of accidents to individuals and could lead to surface subsidence, which could open the tanks to intrusion by water or plants and animals. Release of contaminants to the environment would present human health risks, particularly to individuals who might use contaminated water, in addition to adverse impacts to the environment.

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S.5 Decisions to be Based on This EIS

This EIS provides an evaluation of the environmental impacts of several alternatives for closure of the HLW tanks at SRS. The closure process will take place over a period of up to 30 years. The EIS provides the decision makers with an assessment of the environmental, health, and safety effects of each alternative. The selection of one or more tank closure alternatives, following completion of this EIS, will guide the selection and implementation of a closure method for each HLW tank at SRS.

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Within the framework of the selected alternative(s), and the environmental impact of closure described in the EIS, DOE will select and implement a specific closure method for each tank. | TC

In addition to the closure methods and impacts described in this EIS, the tank closure program will operate under a number of laws, regulations, and regulatory agreements. In addition to the General Closure Plan (a document prepared by DOE and based on responsibilities under the AEA and other laws and regulations and approved by SCDHEC), the closure of individual tanks will be performed in accordance with a tank-specific Closure Module. Each Closure Module will incorporate a specific plan for tank closure and modeling of impacts based on that plan. Through the process of preparing and approving each Closure Module, DOE will select a closure method that is consistent with the alternative(s) selected after completion of this EIS. The aggregate environmental impacts of closing all the tanks would be equal to or less than those described in this EIS. | TC

During the expected 30-year period of tank closure activities, new technologies for tank cleaning or other aspects of the closure process may become available. In a tank-specific Closure Module, DOE would evaluate the technical, regulatory, and performance implications of any new technology. | TC

S.6 Proposed Action and Alternatives

DOE proposes to close the HLW tanks at SRS in accordance with applicable laws and regulations, DOE Orders, and the *Industrial Wastewater Closure Plan for F- and H-Area High-Level Waste Tank Systems* approved by SCDHEC, which specifies the management of residuals as waste incidental to reprocessing. The proposed action evaluated in this EIS would begin when bulk waste removal has been completed. Under each alternative except No Action, DOE would close 49 HLW tanks and associated waste handling equipment including evaporators, pumps, diversion boxes, and transfer lines.